REMARKS

Claims 1, 3-12, 14-22, 46-47, 50-54, 59, 60, and 62-73 are pending in this application. Claims 2, 13, 23-45, 48-49, 55-58 and 61-62 were previously cancelled. Claims 12, 14-22, 59-60 and 63-65 have been withdrawn from consideration. Claims 1, 3-11, 46-47, 50-54, and 62-73 are under consideration.

Amendments to the claims only address the Examiner's concern that one of ordinary skill in the art might not realize that μ in the independent claims means μm. The Examiner so treated the claims. No new matter is included.

Applicants appreciate the withdrawal of the rejections over Levy in view of Ascione, over Iijima, and over Puterka in view of Jackson and Walker (both obviousness and non-statutory obviousness-type double patenting).

Rejection under 35 USC 112, first paragraph

The Examiner now rejects claims 1, 3-11, 14-22, 46-47, 50-54, 59, 60, and 62-72 under 35 USC 112, first paragraph, for failure to comply with the written description requirement. The pending independent claims are claims 1 and 73 (and withdrawn independent claim 12). Applicant notes the Examiner did not reject independent claim 73 under this rejection.

The Examiner states "a film of thickness between 1 μm and 5 mm" in claim 1 is new matter. The Examiner rejects claim 66 stating the phrase "a film of thickness between 5 μ 5 μm and 2 mm" is new matter. The Examiner is pointed to paragraph [0027] of the published application which states:

> [0027] .... In another embodiment, the method of the present invention results in the formation of a membrane or film of one or more layers of highly absorptive particulate materials on the soil surface, ...or the surface of other plant-producing substrates.

The Examiner is pointed to paragraph [0050] which states:

> [0050] In embodiments where the particulate materials coat a substrate, the particulate materials form a coating or film, continuous or intermittent, over the growing medium or unwanted vegetation. In one embodiment, where continuous or present, the coating has a thickness of about 1 μm or more and about 5 mm or less. In another embodiment, the coating has a thickness of about 5 μm or more and about 2 mm or less.

The Examiner stats there is no guidance in the specification for the recited ranges. As anyone of ordinary skill in the art would understand, a film of "thickness of about 1 μm or more and about

5 mm or less" simply means a film of thickness between 1 μm and 5 mm. The Examiner's statement that the phrases in claims 1 (and 66) constitutes new matter is simply clear error.

With respect to claim 73, reciting "a film of thickness between 5 μm and 5 mm", such a range is taught by paragraph 50. The words need not be verbatim. The first range is taught with low and high endpoints, the second range is a preferred intermediate range. What matters is what is taught to one of ordinary skill in the art, and one of ordinary skill in the art would recognize that the low end of the preferred intermendiate range and the high end of the absolute range is taught by the teaching of the two ranges.

The Examiner rejects claims 1, 73, 68, and 69 for the phrase "or mixtures thereof,", stating this was not described in the specification and the invention would not be recognized by one of ordinary skill in the art in the disclosure. The phrase is

> particulate material selected from the group consisting of talc, kaolin, beneficiated kaolin, bentonites, pyrophyllite, feldspar, chalk, limestone, precipitated calcium carbonate, diatomaceous earth, barites, and calcined calcium carbonate, calcined talc, calcined kaolin, baker kaolin, fired kaolin, hydrophobic treated heat treated kaolin, calcined bentonites, calcined clays, calcined pyrophyllite, calcined silica, calcined feldspar, calcined sand, calcined quartz, calcined chalk, calcined limestone, calcined precipitated calcium carbonate, baked calcium carbonate, calcined diatomaceous earth, calcined barites, calcined aluminum trihydrate, calcined pyrogenic silica, calcined titanium dioxide, or mixtures thereof,

Paragraph [0015] states:

> [0015] Examples of particulate hydrophilic materials suitable for use in the present invention include minerals, such as calcium carbonate, talc, kaolin (both hydrous kaolins and calcined kaolin), beneficiated kaolin, bentonites, clays, pyrophyllite, silica, feldspar, sand, quartz, chalk, limestone, precipitated calcium carbonate, diatomaceous earth and barytes; functional fillers such as aluminum trihydrate, pyrogenic silica, and titanium dioxide.

Paragraph [0040] states:

> [0040] The resulting slurry or emulsion retains the particles in finely divided form or as agglomerates wherein most of the particulate materials are dispersed to a particle size of less than about 100 microns, regardless of whether a high boiling organic liquid, low boiling organic liquid, or a high boiling organic liquid and low boiling organic liquid are employed. In one embodiment, 90% by weight or more of **the particulate materials** have a particle size of less than about 10 microns.

> In another embodiment, 90% by weight or more of **the particulate materials** have a particle size of less than about 3 microns. In yet another embodiment, 90% by weight or more of the particulate materials have a particle size of less than about 1 micron.

The Examiner is pointed to the phrase "the particulate materials," noting this is different that stating "the particulate material." Further, if the claim comprises an article selected from A, B, or C, the word "comprising" being open-ended, then it is obvious that any composition comprising A would be encompassed whether or not the composition also comprised B or C.

Rejection under 35 USC 112, second paragraph

The Examiner rejected the claims under 35 USC 112, second paragraph, as certain claims recited "μ" instead of "μm". The claims were amended herein to make this rejection moot.

Rejection over Levy in view of Puterka and Walker and McAllister as evidenced by Ascione.

The Examiner had previously rejected these claims over Levy in view of Puterka and Walker as evidenced by Ascione, said previous rejection being withdrawn in view of previous arguments (many repeated below). Now the Examiner adds McAllister to the combination to teach "the equivalence of iron oxide and titania (titanium oxide) (claim 18). McAllister relates to "a microporous particulate-filled thermoplastic polymeric article" having "a thermoplastic polymeric structure having a plurality of interconnected passageways to provide a network of communicating pores" which contain "discrete submicron or low micron-sized particulate filler." *See* McAllister, Abstract. That is, to polymers having particle fillers therein.

Claim 18 of McAllister reads: "The article of claim 16 wherein said (particulate filler is a) metal oxide is lead oxide, iron oxide, chrome oxide, alumina, titania or silica." Applicants ask in what manner does McAllister teach that titania is equivalent to iron oxide? That they are both metal oxides? Irrelevant. That they are good filler materials to add to a plastic? YES. McAllister teaches:

> The submicron or low micron-sized particles useful in the present invention are capable of forming a colloidal dispersion with the compatible liquid and insoluble in the melt blend of the thermoplastic polymer and compatible liquid from which the articles of the invention are formed. ... Useful particles include metals such as, for example, lead, platinum, tungsten, gold, bismuth, copper, and silver, metal oxides such as, for example, lead oxide, iron oxide, chrome oxide, titania, silica and aluminia, and blends thereof carbonaceous materials such as, for example, carbon black. Thermoplastic

> polymers useful in the present invention include olefinic, condensation and oxidation polymers.

So, McAllister teaches titania and iron oxide can each "form a colloidal dispersion with the compatible liquid and insoluble in the melt blend of the thermoplastic polymer and compatible liquid from which the articles of the invention are formed. ... Thermoplastic polymers useful in the present invention include olefinic, condensation and oxidation polymers." What possible relevance can the Examiner explain regarding whether a compound is used on a horticultural substrate because it is taught to be useful when mixed into a plastic?

In view of the above, Applicants respectfully request the rejection be reconsidered. The following arguments regarding the remaining references has been previously presented, but is included for the use in the appeal. The arguments presented below are summaries of previous arguments pertaining to the same ideas, which are included herein by reference thereto.

Claim 1, as now amended, requires colored particles. Colored particles are pigments. The Examiner's references Levy in view of Puterka and Walker as evidenced by Ascione purport to teach, by combining random portions thereof, all of the limitations of claims 1 and 73 except

> "particulate colored particles different from the particulate material (a), wherein the composition forms a film of thickness between 1 μ and 5 mm disposed over a plant-producing substrate, and wherein the colored particles are present in an amount so that the spectrum of reflected light or heat exchange from the substrate is altered compared to a substrate having a film of particulate material (a) and high boiling oil thereon."

As previously argued, these references teach dyes, and they teach a variety of white pigments. The Examiner notes that Levy teaches use of up to 0.9% of an inorganic pigment such as titanium dioxide. The Examiner states in the first paragraph on page 10 that Levy teaches "Biodac is a cellulosic paper" containing kaolin, calcium carbonate, and titanium oxide. First, these particles are all WHITE, and are NOT COLORED. Levy actually teaches in his material added to water that a useful carrier can be:

> especially dust free paper granules such as BIODAC.RTM., manufactured from recycled, cellulosic based paper waste and containing from about 47 to about 53 wt. % paper fiber, from about 28 to about 34 wt. % clay, and especially paper grade clays or mixtures thereof, including Kaolin, about 14 to about 20 wt. % calcium carbonate or art known equivalents thereof and mixtures thereof, and from about 0.01 to about 0.9 wt. % of an inorganic pigment such as titanium dioxide, or the art known equivalents thereof, and mixtures thereof.

Titanium dioxide is white. Calcium carbonate is white. Kaolin is white. This paper has a bunch of white particles attached thereto. The Examiner previously noted Levy taught use of dyes. In column 16 lines 63-67 Levy states his components can combined with a variety of materials including dyes. A dye is a colored substance that is generally applied as a solution and that has an affinity to the substrate to which it is being applied. The word "dye" is defined in Websters Unabridged Dictionary of the English Language, Random House Inc. (2001) as "a coloring material or matter, a liquid containing coloring matter for imparting a particular hue to cloth, paper, etc ..." The American Heritage College Dictionary, Fourth Ed., Houghton Mifflin Company (2002) defines "dye" as "a substance used to color materials." In contrast with a dye, a pigment generally is insoluble, and has no affinity for the substrate. Applicants invention comprises white particles, an oil, and colored particles (a solid pigment).

Additionally, Levy is used to treat water columns or land about to be flooded. Claim 1 recites the composition be present on a plant producing substrate such as soil and be present in a particular thickness. This thickness is not taught or suggested by Levy.

Puterka discloses a method for protecting surfaces from arthropod infestation which involves treating the surface with an effective amount of finely divided calcined kaolins, hydrophobic calcined kaolins, hydrous kaolins, hydrophobic hydrous kaolins, hydrophobic calcium carbonates, calcium carbonates or mixtures thereof. These minerals of Puterka are bright white reflective particles. Puterka does not teach use of colored particles. Puterka teaches use only of white particles. Puterka states (see claim 9) this material can be slurried with a low boiling organic liquid.

As near as can be understood, the Examiner uses Walker to provide salts and additives to the combination of Puterka and Jackson to obviate the salts mentioned in claim 1 (before the instant amendment). Walker teaches in his abstract:

> The agricultural compositions are prepared by a process comprising mixing together nonionic polyglycol ethers, or oxidation products thereof, and a carrier material. The carrier typically comprises an aqueous or non-aqueous liquid solvent or a solid core material, such as a fertilizer.

This Walker reference therefore appears moot with respect to the currently pending claim 1 as it does not contain any dyes or colored particles.

No references remove the deficiencies of Levy, that is, the use of colored particles (pigments) in combination with the other claimed elements over a plant producing substrate. None of the added references with any degree of relevance resolve the deficiencies of Levy. As no references teach use of colored particles (pigments) in the use of an agricultural film disposed on a horticultural substrate, in the claimed combinations, Applicants respectfully request the rejections be reconsidered.

Conclusion

As each rejection to claims 1 and 73 as amended has been conclusively traversed, Applicants respectfully request the Examiner reconsider the pending claims.

Respectfully submitted,

Date June 18, 2009 By:

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